AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

1. (withdrawn) A method of making an armature, comprising:

placing a commutator and a lamination stack on a armature shaft, the commutator having a commutator ring with a plurality of segments with slots between adjacent segments, the commutator ring having notches at axial inner ends of the slots, the notches filled with an electrically non-conductive material, each segment having a tang at an axial inner end;

attaching ends of coil windings wound in slots in the lamination stack to the tangs of the commutator segments;

placing the armature shaft, commutator and lamination stack in a mold having projections that extend between the tangs; and

molding plastic around at least portions of the armature shaft, commutator and coil windings, the projections and filled notches preventing plastic from flowing into the slots between the commutator segments.

2. (withdrawn) The method of claim 1 wherein the slots extend axially part way into the notches.

3. (withdrawn) The method of claim 1 wherein a core of the electrically non-conductive material is molded in the commutator ring with the non-conductive material

filling the notches during molding, the core molded to have a cylindrical hole extending axially through its center.

4. (withdrawn) The method of claim 3 wherein the electrically non-conductive material is phenolic.

5. (withdrawn) A method of making an armature, comprising:

placing a stuffer type commutator and a lamination stack on a armature shaft, the commutator having a commutator ring with a plurality of segments with slots between adjacent segments, each segment having a wire receiving slot at an axial inner end of the commutator ring, the commutator ring having inserts of insulative material extending axially part way into the slots between the adjacent segments from the axial inner end of the commutator ring;

placing ends of coil windings wound in slots in the lamination stack to wire receiving slots of the commutator segments;

placing the armature shaft, commutator and lamination stack assembly in a mold that has a portion that fits around the commutator ring over the inserts; and

molding plastic around at least portions of the armature shaft, commutator and lamination stack, the portion of the mold that fits around the commutator ring over the inserts preventing the plastic from flowing into the slots between the commutator segments.

6 – 44 (cancelled)

45. (withdrawn) A method of making an armature for an electric motor, comprising:

placing a lamination stack having a plurality of slots therein on a shaft;

lining the slots with slot liners made of thermally conductive plastic;

affixing a commutator to an end of the shaft;

winding magnet wires in the slots to form coils; and

affixing ends of the magnet wires to the commutator.

46. (withdrawn) The method of claim 45 wherein the thermally conductive plastic is molded in the slots in the lamination stack to form the slot liners.

47. (withdrawn) The method of claim 45 wherein the thermally conductive plastic is molded around the shaft at ends of the lamination stack to form end spiders.

48, 49 (cancelled)

50. (withdrawn) A method of making a stator for an electric motor comprising lining slots in a lamination stack with slot liners made of thermally conductive plastic and winding wire in the slots to form coils.

51. (withdrawn) The method of claim 50 wherein thermally conductive plastic is molded in the slots of the lamination stack to form the slot liners.

52 - 66 (cancelled)

67. (withdrawn) A method of forming an armature for an electric motor, comprising:

winding magnet wires having a coating of heat activated adhesive thereon in a plurality of slots in a lamination stack on a shaft to form coils; and

molding hot plastic around the magnet wires, the heat of the plastic as it is being molded activating the heat activated adhesive on the magnet wires to bond the magnet wires of each coil together.

68. (withdrawn) The method of claim 67 wherein molding hot plastic around the magnet wires includes molding hot thermally conductive plastic around the magnet wires.

69. (withdrawn) The method of claim 68 wherein molding hot plastic around the magnet wires activates the heat activated adhesive on the magnet wires to bond the magnet wires of each coil into a mechanically solid coil within the plastic to prevent movement of the coil and enhance heat transfer out of the magnet wires.

70. (withdrawn) The method of claim 67 wherein molding hot plastic around the magnet wires includes molding the plastic at a pressure sufficient to at least partially deform individual magnet wires into at least partial polygonal shapes.

71 – 79 (cancelled)

80. (withdrawn) A method of forming a stator for an electric motor comprising:

winding magnet wires having a coating of heat activated adhesive thereon in a plurality of slots in a lamination stack to form coils; and

molding hot plastic around the magnet wires, the heat of the plastic as it is being molded activating the heat activated adhesive on the magnet wires to bond the magnet wires of each coil together.

81. (withdrawn) The method of claim 80 wherein molding hot plastic around the magnet wires includes molding hot thermally conductive plastic around the magnet wires.

82. (withdrawn) The method of claim 81 wherein molding hot plastic around the magnet wires activates the heat activated adhesive on the magnet wires to bond the magnet wires of each coil into a mechanically solid coil within the plastic to prevent movement of the coil and enhance heat transfer out of the magnet wires.

83. (withdrawn) The method of claim 80 wherein molding hot plastic around the magnet wires including molding the plastic at a pressure sufficient to at least partially deform individual magnet wires into at least partial polygonal shapes.

84 – 90 (cancelled)

91. (withdrawn) A method of forming a coil structure for a dynamoelectric machine, comprising:

winding magnet wires having a coating of heat activated adhesive thereon in a plurality of slots in a lamination stack on a shaft to form coils; and

molding hot plastic around the magnet wires, the heat of the hot plastic activating the heat activated adhesive on the magnet wires to bond the magnet wires of each coil together.

92. (withdrawn) The method of claim 91 wherein molding hot plastic around the magnet wires includes molding hot thermally conductive plastic around the magnet wires.

93. (withdrawn) The method of claim 92 wherein molding hot plastic around the magnet wires activates the heat activated adhesive on the magnet wires to bond the magnet wires of each coil into a mechanically solid coil within the plastic to reduce movement of the coil and enhance heat transfer out of the magnet wires.

94. (withdrawn) The method of claim 91 wherein molding hot plastic around the magnet wires includes molding the plastic at a pressure sufficient to at least partially deform individual magnet wires into at least partial polygonal shapes.

95. (withdrawn) The method of claim 91 wherein the dynamoelectric machine is an electric motor.

96. (withdrawn) The method of claim 91 wherein the dynamoelectric machine is an alternator.

97. (withdrawn) The method of claim 91 wherein the dynamoelectric machine is a generator.

98 – 104 (cancelled)

105. (withdrawn) A method of making a coil structure for a dynamoelectric machine, comprising:

winding magnet wires in a plurality of slots in a lamination stack to form coils;

molding plastic around the magnet wires at a pressure sufficient to at least partially deform individual magnet wires into at least partial polygonal shapes.

106. (withdrawn) The method of claim 105 wherein the at least partial deformation of individual magnet wires into at least partial polygonal shapes increases surface area contact between individual magnet wires to enhance heat transfer from the magnet wires to the thermally conductive plastic.

107. (withdrawn) The method of claim 106 wherein the dynamoelectric machine is an electric motor.

108. (withdrawn) The method of claim 107 wherein the coil structure is an armature.

109. (withdrawn) The method of claim 107 wherein the coil structure is a stator.

110. (withdrawn) The method of claim 106 wherein the dynamoelectric machine is an alternator.

111. (withdrawn) The method of claim 106 wherein the dynamoelectric machine is a generator.

112 – 116 (cancelled)

117. (withdrawn) A method for forming an armature for an electric motor, comprising:

placing an electrically insulative sleeve on an armature shaft;

next securing a lamination stack having slots therein on the armature shaft with the insulative sleeve disposed therebetween;

next molding electrically insulative plastic in the slots of the lamination stack to form slot liners and around the ends of the lamination stack to form end spiders;

next securing a commutator on one end of the armature shaft with the insulative sleeve disposed therebetween;

next winding magnet wires in the slots in the lamination stack and securing ends of the magnet wires to the commutator; and

next molding thermally conductive plastic to at least partially encase the magnet wires in plastic.

118. (withdrawn) The method of claim 117 wherein placing the insulative sleeve on the shaft includes applying a ceramic coating to the shaft.

119. (withdrawn) The method of claim 117 wherein the electrically insulative plastic is also thermally conductive plastic.

120 – 124 (cancelled)

125. (withdrawn) A method for forming an armature for an electric motor, comprising:

placing an electrically insulative sleeve on armature shaft;

next securing a lamination stack having slots therein on the armature shaft with the insulative sleeve disposed therebetween;

next molding electrically insulative plastic in the slots of the lamination stack to form slot liners and around the ends of the lamination stack to form end spiders;

next securing a commutator on one end of the armature shaft adjacent an end of the insulative sleeve;

next winding magnet wires in the slots in the lamination stack and securing ends of the magnet wires to the commutator; and

next molding thermally conductive plastic to at least partially encase the magnet wires and preventing any of the thermally conductive plastic from flowing into any gap between the commutator and the insulative sleeve.

126. (withdrawn) The method of claim 125 wherein preventing any of the thermally conductive plastic from flowing into any gap between the commutator and the insulative sleeve includes placing an insulative seal around the insulative sleeve and abutting the commutator prior to molding the thermally conductive plastic.

127. (withdrawn) The method of claim 125 wherein preventing any of the thermally conductive plastic from flowing into any gap between the commutator and the insulative sleeve includes providing a mold used to mold the thermally conductive plastic with a dam that surrounds the insulative sleeve adjacent the commutator and abuts the commutator.

128. (withdrawn) The method of claim 125 wherein placing the insulative sleeve on the shaft includes applying a ceramic coating to the shaft.

129. (withdrawn) The method of claim 125 wherein the electrically insulative plastic is also thermally conductive plastic.

130. (withdrawn) A method of manufacturing an armature for an electric motor, comprising:

placing a commutator and a lamination stack on an armature shaft;

winding magnet wire in slots in the lamination stacks to form coils;

attaching ends of the magnet wire to the commutator;

molding plastic around the magnet wire and around the shaft of the armature at ends of the lamination stack;

adjusting a spinning inertia of the armature by adjusting at least one of a mass of the plastic molded and a distribution of the plastic molded.

131. (withdrawn) The method of claim 130 wherein the mass of plastic molded is adjusted by varying at least one of the density of the plastic molded and the amount of plastic molded.

132. (withdrawn) The method of claim 130 wherein adjusting the distribution of the plastic molded includes adjusting the mass of plastic placed at varying distances from an axis of rotation of the armature shaft.

133. (withdrawn) The method of claim 130 wherein the plastic is thermally conductive plastic.

134. (withdrawn) A method of manufacturing an armature for an electric motor, comprising:

placing a commutator and a lamination stack on an armature shaft;

winding magnet wire in slots in the lamination stacks to form coils;

attaching ends of the magnet wire to the commutator;

molding plastic around the magnet wire and around the shaft of the armature at ends of the lamination stack;

adjusting at least one of a resonant frequency and critical speed of the armature by adjusting at least one of a geometry of the plastic molded, the physical properties of the plastic and the mechanical properties of the plastic.

135. (withdrawn) The method of claim 134 wherein adjusting the geometry of the plastic includes molding a sufficient amount of the plastic around the armature shaft to reduce vibration and flexing of the armature shaft.

136. (withdrawn) The method of claim 134 wherein adjusting the mechanical properties of the plastic includes adjusting at least one of its tensile modulus and flexural modulus and adjusting the physical properties of the plastic includes adjusting at least one of its density and hardness.

137. (withdrawn) The method of claim 134 wherein molding the plastic increases vibration damping of the armature shaft.

138. (withdrawn) The method of claim 134 wherein the plastic is thermally conductive plastic.

139. (withdrawn) A method of manufacturing an armature for an electric motor, comprising:

placing a commutator and a lamination stack on an armature shaft;

winding magnet wire in slots in the lamination stacks to form coils;

attaching ends of the magnet wire to the commutator; and

molding plastic around the magnet wire and around the shaft of the armature to stiffen the armature and thereby increase the critical speed of the armature.

140. (withdrawn) The method of claim 139 wherein the plastic is thermally conductive plastic.

141. (currently amended) A method for forming a given size armature to increase the power of an electric motor using that given size armature, comprising:

securing a lamination stack having slots therein on an armature shaft;

securing a commutator on one end of the armature shaft;

winding magnet wires in the slots in the lamination stack and securing ends of the magnet wires to the commutator; and

molding plastic to at least partially encase the magnet wires in the plastic;

the magnet wires being larger than smaller magnet wires used in an armature of the given size where the magnet wires are not at least partially encased in plastic, the electric motor using the given size armature having the larger magnet wires having increased power compared to the electric motor using the given size armature having the smaller magnet wires.

142. (withdrawn) The method of claim 141 wherein the magnet wires include armature lead wires that extend from the slots to the commutator and molding the plastic includes molding the plastic around the armature lead wires to support them and prevent them from vibrating when the armature rotates during operation.

143. (original) The method of claim 141 wherein the plastic is molded around the magnet wires in the slots to retain them in the slots, the larger magnet wires wound in the slots filling a larger volume of the slot than the smaller magnet wires.

144. (withdrawn) The method of claim 143 wherein the magnet wires include armature lead wires that extend from the slots to the commutator and molding the plastic includes molding the plastic around the armature lead wires to support them and prevent them from vibrating when the armature rotates during operation.

145. (original) The method of claim 141 and further including applying pressure to the magnet wires to compress them in the slots.

146. (original) The method of claim 145 wherein applying pressure to the magnet wires includes applying the pressure with the plastic while it is being molded and further including retaining the magnet wires in the slots with molded plastic.

147. (original) The method of claim 145 wherein applying pressure to the magnet wires includes applying the pressure by applying iso-static pressure to the magnet wires before the plastic is molded.

148. (original) The method of claim 147 wherein applying iso-static pressure includes placing the armature with the magnet wires wound in the slots in the lamination stack in a cavity of a fluid bladder and pressurizing the fluid bladder.

149. (withdrawn) The method of claim 145 wherein winding magnet wires in the slots includes winding magnet wires having a layer of heat activated adhesive thereon and activating the heat activated adhesive with heat of the plastic during the molding of the plastic.

150. (withdrawn) The method of claim 141 wherein the magnet wires include armature lead wires that extend from the slots to the commutator and molding the plastic includes injection molding the plastic around the magnet wires in the slots of the lamination stack, around the armature lead wires and around the ends of the magnet wires where they are secured to the commutator.

151. (withdrawn) The method of claim 150 wherein winding magnet wires in the slots includes winding magnet wires having a layer of heat activated adhesive thereon and activating the heat activated adhesive with heat of the plastic during the molding of the plastic.

152. (withdrawn) The method of claim 151 and further including applying pressure to the magnet wires to compress them in the slots.

153. (withdrawn) The method of claim 152 wherein applying pressure to the magnet wires includes applying the pressure with the plastic while it is being molded and retaining the magnet wires in the slots with molded plastic.

154. (withdrawn) The method of claim 152 wherein applying pressure to the magnet wires includes applying iso-static pressure to the magnet wires before the plastic is molded.

155. (withdrawn) The method of claim 154 wherein applying iso-static pressure includes placing the armature with the magnet wires wound in the slots in the lamination stack in a cavity of a fluid bladder and pressurizing the fluid bladder.

156. (withdrawn) The method of claim 141 wherein the plastic is a thermally conductive plastic.

157. (withdrawn) The method of claim 156 wherein the plastic has a base polymer and a thermally conductive additive of at least one of aluminum oxide, boron nitride, and aluminum nitride.

158. (currently amended) A method for forming a given size armature to increase the power of an electric motor using that given size armature, comprising:

securing a lamination stack having slots therein on an armature shaft;

securing a commutator on one end of the armature shaft;

winding magnet wires in the slots in the lamination stack and securing ends of the magnet wires to the commutator;

molding plastic over the magnet wires to at least partially encase the magnet wires in the plastic; and

retaining a larger volume of magnet wires in the slots with the plastic than in an armature of the given size where the magnet wires are not at least partially encased in plastic, the electric motor using the given size armature having the larger volume of magnet wires having increased power compared to the electric motor using the given size armature having the smaller volume of magnet wires.

159. (original) The method of claim 158 wherein the larger volume of magnet wires includes the same number of turns of larger magnet wires than smaller magnet wires used in the given size armature without the magnet wires at least partially encased in the plastic.

160. (withdrawn) The method of claim 159 wherein the magnet wires include armature lead wires that extend from the slots to the commutator and molding the plastic includes molding the plastic over the armature lead wires to support them and prevent them from vibrating when the armature rotates during operation.

161. (currently amended) The method of claim ~~160~~159 and further including applying pressure to the magnet wires with the plastic while it is being molded to compress the magnet wires in the slots and retaining the magnet wires in the slots with molded plastic.

162. (withdrawn) The method of claim 161 wherein winding magnet wires in the slots includes winding magnet wires having a layer of heat activated adhesive thereon and activating the heat activated adhesive with heat of the plastic during the molding of the plastic.

163. (withdrawn) The method of claim 162 wherein the plastic is a thermally conductive plastic.

164. (withdrawn) The method of claim 163 wherein the plastic has a base polymer and a thermally conductive additive of at least one of aluminum oxide, boron nitride, and aluminum nitride.

165. (currently amended) The method of claim ~~150~~159 and further including applying iso-static pressure to the magnet wires to compress the magnet wires in the slots before plastic is molded by placing the armature with the magnet wires wound in the slots in a cavity of a fluid bladder and pressurizing the fluid bladder.

166. (withdrawn) The method of 165 wherein winding magnet wires in the slots includes winding magnet wires having a layer of heat activated adhesive thereon and activating the heat activated adhesive with heat of the plastic during the molding of the plastic.

167. (original) The method of claim 158 wherein the larger volume of magnet wires include a greater number of turns of magnet wires than in the armature of the given size without the magnet wires at least partially encased in plastic.

168. (withdrawn) The method of claim 167 wherein the magnet wires include armature lead wires that extend from the slots to the commutator and molding the plastic includes molding the plastic over the armature lead wires to support them and prevent them vibrating when the armature rotates during operation.

169. (currently amended) The method of claim ~~168~~167 and further including applying pressure to the magnet wires with the plastic while it is being molded to compress the magnet wires in the slots and retaining the magnet wires in the slots with molded plastic.

170. (withdrawn) The method of claim 169 wherein winding magnet wires in the slots includes winding magnet wires having a layer of heat activated adhesive thereon and activating the heat activated adhesive with heat of the plastic during the molding of the plastic.

171. (withdrawn) The method of claim 170 wherein the plastic is a thermally conductive plastic.

172. (withdrawn) The method of claim 171 wherein the plastic has a base polymer and a thermally conductive additive of at least one of aluminum oxide, boron nitride and aluminum nitride.

173. (currently amended) The method of claim ~~168~~167 and further including applying iso-static pressure to the magnet wires to compress the magnet wires in the slots before plastic is molded by placing the armature with the magnet wires wound in the slots in a cavity of a fluid bladder and pressurizing the fluid bladder.

174. (withdrawn) The method of 173 wherein winding magnet wires in the slots includes winding magnet wires having a layer of heat activated adhesive thereon

and activating the heat activated adhesive with heat of the plastic during the molding of the plastic.

175. (withdrawn) A method for forming an armature for an electric motor, comprising:

securing a lamination stack having slots therein on an armature shaft;

securing a commutator on one end of the armature shaft;

winding magnet wires in the slots in the lamination stack and securing ends of the magnet wires to the commutator, the magnet wires having armature lead wires that extend from the slots to the commutator; and

molding plastic over the magnet wires to encase at least the armature lead wires in plastic.

176. (withdrawn) The method of claim 175 wherein molding the plastic includes molding it over the magnet wires in the slots and over the ends of the magnet wires where they are secured to the commutator.

177. (withdrawn) The method of claim 176 wherein the plastic is thermally conductive plastic.

178. (withdrawn) The method of claim 177 wherein the plastic has a base polymer and a thermally conductive additive of at least one of aluminum oxide, boron nitride and aluminum nitride.

179. (withdrawn) A method for forming an armature for an electric motor, comprising:

securing a lamination stack having slots therein on an armature shaft;

securing a commutator on one end of the armature shaft;

winding magnet wires in the slots in the lamination stack and securing ends of the magnet wires to the commutator, the magnet wires having armature lead wires that extend from the slots to the commutator; and

molding plastic over the magnet wires to retain them in the slots and to support the armature lead wires and prevent them from vibrating when the armature rotates during operation.

180. (withdrawn) The method of claim 179 wherein molding the plastic includes molding it over the magnet wires in the slots and over the ends of the magnet wires where they are secured to the commutator.

181. (withdrawn) The method of claim 180 wherein the plastic is thermally conductive having a base polymer and a thermally conductive additive of at least one of aluminum oxide, boron nitride, and aluminum nitride.

182. (withdrawn) The method of claim 141 wherein the plastic is a thermoplastic and molding the plastic includes injection molding it.

183. (withdrawn) The method of claim 141 wherein the plastic is a thermoset and molding the plastic includes one of injection molding, transfer molding and compression molding.

184. (withdrawn) The method of claim 158 wherein the plastic is a thermoplastic and molding the plastic includes injection molding it.

185. (withdrawn) The method of claim 159 wherein the plastic is a thermoset and molding the plastic includes one of injection molding, transfer molding and compression molding.

186. (withdrawn) The method of claim 175 wherein the plastic is a thermoplastic and molding the plastic includes injection molding it.

187. (withdrawn) The method of claim 175 wherein the plastic is a thermoset and molding the plastic includes one of injection molding, transfer molding and compression molding.

188 – 220 (cancelled)

221. (withdrawn) A method of forming and balancing an armature, comprising:

securing a lamination stack having slots therein on an armature shaft;

securing a commutator on one end of the armature shaft;

winding magnet wires in the slots in the lamination stack and securing ends of the magnet wires to the commutator;

molding plastic to at least partially encase the magnet wires in the plastic and forming a balancing feature; and

removing plastic from at least one of the balancing rings to balance the armature during dynamic balancing of the armature.

222. (withdrawn) A method of forming and balancing an armature, comprising:

securing a lamination stack having slots therein on an armature shaft;

securing a commutator on one end of the armature shaft;

winding magnet wires in the slots in the lamination stack and securing ends of the magnet wires to the commutator;

molding plastic to at least partially encase the magnet wires in the plastic and forming balancing rings adjacent axial sides of the lamination stack; and

removing plastic from at least one of the balancing rings to balance the armature during dynamic balancing of the armature.

223. (withdrawn) A method of forming and balancing an armature, comprising:

securing a lamination stack having slots therein on an armature shaft;

securing a commutator on one end of the armature shaft;

winding magnet wires in the slots in the lamination stack and securing ends of the magnet wires to the commutator;

molding plastic to at least partially encase the magnet wires in the plastic and forming a balancing feature having at least one pocket therein; and

placing a weight in the pocket to balance the armature during dynamic balancing of the armature.

224. (withdrawn) A method of forming and balancing an armature, comprising:

securing a lamination stack having slots therein on an armature shaft;

securing a commutator on one end of the armature shaft;

winding magnet wires in the slots in the lamination stack and securing ends of the magnet wires to the commutator;

molding plastic to at least partially encase the magnet wires in the plastic and forming balancing rings adjacent axial sides of the lamination stack, the balancing rings having pockets therein; and

placing at least one weight in at least one pocket of at least one of the balancing rings to balance the armature during dynamic balancing of the armature.

225. (withdrawn) A method for forming an armature for an electric motor, comprising:

placing an electrically insulative sleeve on an armature shaft;

securing a lamination stack having slots therein on the armature shaft;

securing a commutator on one end of the armature shaft;

winding magnet wires in the slots in the lamination stack and securing ends of the magnet wires to the commutator; and

molding thermally conductive plastic to at least partially encase the magnet wires in plastic, the thermally conductive plastic having a base polymer that is a blend of at least two polymers.

226. (withdrawn) The method of claim 225 wherein the base polymer is a blend of at least two of nylon, PPS, PPA and LCP.

227. (withdrawn) The method of claim 225 wherein the base polymer is a blend of PPS and at least one of nylon, PPA and LCP.

228. (withdrawn) The method of claim 225 wherein the base polymer is a blend of about ninety percent PPS and about ten percent LCP.

229 – 231 (cancelled)

232. (new) A method for making an electric motor with a given size armature to increase the power of the electric motor using that given size armature, comprising:

securing a lamination stack having slots therein on an armature shaft;

securing a commutator on one end of the armature shaft;

winding magnet wires in the slots in the lamination stack and securing ends of the magnet wires to the commutator;

molding plastic to at least partially encase the magnet wires in the plastic;

the magnet wires being larger than smaller magnet wires used in an armature of the given size where the magnet wires are not at least partially encased in plastic, the electric motor using the given size armature having the larger magnet wires having increased power compared to the electric motor using the given size armature having the smaller magnet wires; and

disposing the armature in a stator.

233. (new) The method of claim 232 wherein the plastic is molded around the magnet wires in the slots to retain them in the slots, the larger magnet wires wound in the slots filling a larger volume of the slot than the smaller magnet wires.

234. (new) The method of claim 232 and further including applying pressure to the magnet wires to compress them in the slots.

235. (new) The method of claim 234 wherein applying pressure to the magnet wires includes applying the pressure with the plastic while it is being molded and further including retaining the magnet wires in the slots with molded plastic.

236. (new) A method for making an electric motor with a given size armature to increase the power of the electric motor using that given size armature, comprising:

securing a lamination stack having slots therein on an armature shaft;

securing a commutator on one end of the armature shaft;

winding magnet wires in the slots in the lamination stack and securing ends of the magnet wires to the commutator;

molding plastic over the magnet wires to at least partially encase the magnet wires in the plastic;

retaining a larger volume of magnet wires in the slots with the plastic than in an armature of the given size where the magnet wires are not at least partially encased in plastic, the electric motor using the given size armature having the larger volume of magnet wires having increased power compared to the electric motor using the given size armature having the smaller volume of magnet wires; and

disposing the armature in a stator.

237. (new) The method of claim 236 wherein the larger volume of magnet wires includes the same number of turns of larger magnet wires than smaller magnet wires used in the given size armature without the magnet wires at least partially encased in the plastic.

238. (new) The method of claim 237 and further including applying pressure to the magnet wires with the plastic while it is being molded to compress the magnet wires in the slots and retaining the magnet wires in the slots with molded plastic.

239. (new) The method of claim 236 wherein the larger volume of magnet wires include a greater number of turns of magnet wires than in the armature of the given size without the magnet wires at least partially encased in plastic.

240. (new) A method for making a power tool having an electric motor with a given size armature to increase the power of the electric motor using that given size armature, comprising:

securing a lamination stack having slots therein on an armature shaft;

securing a commutator on one end of the armature shaft;

winding magnet wires in the slots in the lamination stack and securing ends of the magnet wires to the commutator;

molding plastic to at least partially encase the magnet wires in the plastic;

the magnet wires being larger than smaller magnet wires used in an armature of the given size where the magnet wires are not at least partially encased in plastic, the electric motor using the given size armature having the larger magnet wires having increased power compared to the electric motor using the given size armature having the smaller magnet wires; and

disposing the armature in a stator to form the electric motor and disposing the electric motor in the power tool.

241. (new) The method of claim 240 wherein the plastic is molded around the magnet wires in the slots to retain them in the slots, the larger magnet wires wound in the slots filling a larger volume of the slot than the smaller magnet wires.

242. (new) The method of claim 241 and further including applying pressure to the magnet wires to compress them in the slots.

243. (new) The method of claim 242 wherein applying pressure to the magnet wires includes applying the pressure with the plastic while it is being molded and further including retaining the magnet wires in the slots with molded plastic.

244. (new) A method for making a power tool having an electric motor with a given size armature to increase the power of the electric motor using that given size armature, comprising:

securing a lamination stack having slots therein on an armature shaft;

securing a commutator on one end of the armature shaft;

winding magnet wires in the slots in the lamination stack and securing ends of the magnet wires to the commutator;

molding plastic over the magnet wires to at least partially encase the magnet wires in the plastic;

retaining a larger volume of magnet wires in the slots with the plastic than in an armature of the given size where the magnet wires are not at least partially encased in plastic, the electric motor using the given size armature having the larger volume of magnet wires having increased power compared to the electric motor using the given size armature having the smaller volume of magnet wires; and

disposing the armature in a stator to form the electric motor and disposing the electric motor in the power tool.

245. (new) The method of claim 244 wherein the larger volume of magnet wires includes the same number of turns of larger magnet wires than smaller magnet wires used in the given size armature without the magnet wires at least partially encased in the plastic.

246. (new) The method of claim 245 and further including applying pressure to the magnet wires with the plastic while it is being molded to compress the magnet wires in the slots and retaining the magnet wires in the slots with molded plastic.

247. (new) The method of claim 245 wherein the larger volume of magnet wires include a greater number of turns of magnet wires than in the armature of the given size without the magnet wires at least partially encased in plastic.